



**BAYER ADVANCED COMPLETE BRAND INSECT KILLER
FOR SOIL & TURF READY-TO-SPREAD GRANULES**

Version 2.0 / USA
102000011911

1/10
Revision Date: 05/06/2014
Print Date: 05/07/2014

**SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE
COMPANY/UNDERTAKING**

Product identifier

Trade name BAYER ADVANCED COMPLETE BRAND INSECT KILLER FOR SOIL
& TURF READY-TO-SPREAD GRANULES

Product code (UVP) 06424120

SDS Number 102000011911

EPA Registration No. 72155-31

Relevant identified uses of the substance or mixture and uses advised against

Use Insecticide

Restrictions on use See product label for restrictions.

Information on manufacturer

Bayer Environmental Science
2 T.W. Alexander Drive
Research Triangle PK, NC 27709
United States

**Emergency Telephone
Number (24hr/ 7 days)** 1-800-334-7577 (24 hours/day)

**Product Information
Telephone Number** 1-800-331-2867

SDS Information or Request SDSINFO.BCS-NA@bayer.com

SECTION 2: HAZARDS IDENTIFICATION

Classification in accordance with regulation HCS 29CFR §1910.1200

This material is not hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29CFR 1910.1200.

Other hazards

No particular hazards known.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

| Hazardous Component Name | CAS-No. | Average % by Weight |
|--------------------------|-------------|---------------------|
| Imidacloprid | 138261-41-3 | 0.15 |
| Beta-Cyfluthrin | 68359-37-5 | 0.05 |



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SECTION 4: FIRST AID MEASURES

Description of first aid measures

| | |
|-----------------------|---|
| General advice | When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment. |
| Inhalation | Move to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a physician or poison control center immediately. |
| Skin contact | Take off contaminated clothing and shoes immediately. Wash off immediately with plenty of water for at least 15 minutes. Call a physician or poison control center immediately. |
| Eye contact | Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a physician or poison control center immediately. |
| Ingestion | Call a physician or poison control center immediately. Rinse out mouth and give water in small sips to drink. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person. Do not leave victim unattended. |

Most important symptoms and effects, both acute and delayed

Symptoms To date no symptoms are known.

Indication of any immediate medical attention and special treatment needed

Treatment Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended. There is no specific antidote.

SECTION 5: FIREFIGHTING MEASURES

Extinguishing media

Suitable Water, Foam, Dry chemical

Unsuitable None known.

Special hazards arising from the substance or mixture Dangerous gases are evolved in the event of a fire.

Advice for firefighters

Special protective equipment for fire-fighters Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.

Further information Keep out of smoke. Cool closed containers exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water courses.



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| | |
|---------------------------------|-------------------|
| Flash point | not applicable |
| Autoignition temperature | no data available |
| Lower explosion limit | not applicable |
| Upper explosion limit | not applicable |
| Explosivity | no data available |

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Precautions Keep unauthorized people away. Isolate hazard area. Avoid contact with spilled product or contaminated surfaces.

Methods and materials for containment and cleaning up

Methods for cleaning up Avoid dust formation. Sweep up or vacuum up spillage and collect in suitable container for disposal. Clean contaminated floors and objects thoroughly, observing environmental regulations.

Additional advice Use personal protective equipment. Do not allow to enter soil, waterways or waste water canal.

Reference to other sections Information regarding safe handling, see section 7.
Information regarding personal protective equipment, see section 8.
Information regarding waste disposal, see section 13.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Use only in area provided with appropriate exhaust ventilation. Handle and open container in a manner as to prevent spillage.

Hygiene measures Remove Personal Protective Equipment (PPE) immediately after handling this product. Remove soiled clothing immediately and clean thoroughly before using again. Wash thoroughly and put on clean clothing.

Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers Store in original container and out of the reach of children, preferably in a locked storage area. Keep containers tightly closed in a dry, cool and well-ventilated place.



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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

| Components | CAS-No. | Control parameters | Update | Basis |
|-----------------------------------|-------------|---------------------|---------|----------|
| Imidacloprid | 138261-41-3 | 5ug/m3 (AN ESL) | 07 2011 | TX ESL |
| Imidacloprid | 138261-41-3 | 50ug/m3 (ST ESL) | 07 2011 | TX ESL |
| Imidacloprid | 138261-41-3 | 0.7 mg/m3 (TWA) | | OES BCS* |
| Beta-Cyfluthrin | 68359-37-5 | 50ug/m3 (ST ESL) | 10 2003 | TX ESL |
| Beta-Cyfluthrin (Particulate.) | 68359-37-5 | 50ug/m3 (ST ESL) | 10 2003 | TX ESL |
| Beta-Cyfluthrin (Particulate.) | 68359-37-5 | 5ug/m3 (AN ESL) | 10 2003 | TX ESL |
| Beta-Cyfluthrin | 68359-37-5 | 5ug/m3 (AN ESL) | 10 2003 | TX ESL |
| Beta-Cyfluthrin | 68359-37-5 | 0.01 mg/m3 (TWA) | | OES BCS* |

*OES BCS: Internal Bayer CropScience "Occupational Exposure Standard"

Exposure controls

Personal protective equipment

In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the following recommendations would apply.

Respiratory protection

Respiratory protection is not required under anticipated circumstances of exposure.
In case of insufficient ventilation wear suitable respiratory equipment.

Hand protection

Chemical resistant nitrile rubber gloves

Eye protection

Safety glasses with side-shields

Skin and body protection

Wear long-sleeved shirt and long pants and shoes plus socks.

General protective measures

There are no known hazards associated with this product when used according to the label directions. The following guidelines should be followed.

Avoid breathing dust.

Avoid contact with skin and eyes.

Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics.

Do not allow children or pets to enter the treated area until granules have been watered into the soil and the grass or soil is dry.



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SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---|----------------------------|
| Appearance | light brown |
| Physical State | granular |
| Odor | characteristic |
| Odour Threshold | no data available |
| pH | 6.7 at 5 % |
| Vapor Pressure | no data available |
| Vapor Density (Air = 1) | no data available |
| Bulk density | 43 - 49 lb/ft ³ |
| Evapouration rate | not applicable |
| Boiling Point | not applicable |
| Melting / Freezing Point | not applicable |
| Water solubility | dispersible |
| Minimum Ignition Energy | no data available |
| Decomposition temperature | no data available |
| Partition coefficient: n-octanol/water | no data available |
| Viscosity | not applicable |
| Flash point | not applicable |
| Autoignition temperature | no data available |
| Lower explosion limit | not applicable |
| Upper explosion limit | not applicable |
| Explosivity | no data available |

SECTION 10: STABILITY AND REACTIVITY

| | |
|---|---|
| Reactivity | |
| Thermal decomposition | no data available |
| Chemical stability | Stable under normal conditions. |
| Possibility of hazardous reactions | No dangerous reaction known under conditions of normal use. |



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| | |
|---|--|
| Conditions to avoid | no data available |
| Incompatible materials | Acids |
| Hazardous decomposition products | No decomposition products expected under normal conditions of use. |

SECTION 11: TOXICOLOGICAL INFORMATION

Exposure routes Eye contact, Ingestion, Inhalation, Skin Absorption

Immediate Effects

Eye Moderate eye irritation.

Skin Harmful if absorbed through skin.

Ingestion Harmful if swallowed.

Inhalation Harmful if inhaled.

Information on toxicological effects

Acute oral toxicity LD50 (male/female combined rat) > 2,000 mg/kg

Acute inhalation toxicity LC50 (male/female combined rat) > 1.2 mg/l
Exposure time: 4 h
Highest attainable concentration.
Determined in the form of a respirable aerosol.
(actual)

LC50 (male/female combined rat) > 4.8 mg/l
Exposure time: 1 h
Determined in the form of a respirable aerosol.
Extrapolated from the 4 hr LC50.
(actual)

Acute dermal toxicity LD50 (male/female combined rat) > 4,000 mg/kg

Skin irritation No skin irritation (rabbit)

Eye irritation No eye irritation (rabbit)

Sensitisation Non-sensitizing. (guinea pig)

Assessment repeated dose toxicity

The toxic effects of beta-Cyfluthrin are related to transient hyperactivity typical for pyrethroid neurotoxicity.

Imidacloprid did not cause specific target organ toxicity in experimental animal studies.

Assessment Mutagenicity

beta-Cyfluthrin was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

Imidacloprid was not mutagenic or genotoxic based on the overall weight of evidence in a battery of in vitro and in vivo tests.

Assessment Carcinogenicity



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beta-Cyfluthrin was not carcinogenic in lifetime feeding studies in rats and mice.
Imidacloprid was not carcinogenic in lifetime feeding studies in rats and mice.

ACGIH

None.

NTP

None.

IARC

None.

OSHA

None.

Assessment toxicity to reproduction

beta-Cyfluthrin caused reproduction toxicity in a two-generation study in rats only at dose levels also toxic to the parent animals. The reproduction toxicity seen with beta-Cyfluthrin is related to parental toxicity.

Imidacloprid caused reproduction toxicity in a two-generation study in rats only at dose levels also toxic to the parent animals. The reproduction toxicity seen with Imidacloprid is related to parental toxicity.

Assessment developmental toxicity

beta-Cyfluthrin caused developmental toxicity only at dose levels toxic to the dams. The developmental effects seen with beta-Cyfluthrin are related to maternal toxicity.

Imidacloprid caused developmental toxicity only at dose levels toxic to the dams. The developmental effects seen with Imidacloprid are related to maternal toxicity.

Further information

Acute toxicity studies have been bridged from a similar formulation(s).
The non-acute information pertains to the active ingredient(s).

SECTION 12: ECOLOGICAL INFORMATION

Toxicity to fish

LC50 (Rainbow trout (*Oncorhynchus mykiss*)) 0.000068 mg/l
Exposure time: 96 h
The value mentioned relates to the active ingredient beta-cyfluthrin.

LC50 (Rainbow trout (*Oncorhynchus mykiss*)) 211 mg/l
Exposure time: 96 h
The value mentioned relates to the active ingredient imidacloprid.

Toxicity to aquatic invertebrates

EC50 (Water flea (*Daphnia magna*)) 0.00029 mg/l
Exposure time: 48 h
The value mentioned relates to the active ingredient beta-cyfluthrin.

EC50 (Water flea (*Daphnia magna*)) 85 mg/l
Exposure time: 48 h
The value mentioned relates to the active ingredient imidacloprid.



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LC50 (*Chironomus riparius* (non-biting midge)) 0.0552 mg/l
Exposure time: 24 h
The value mentioned relates to the active ingredient imidacloprid.

| | |
|-----------------------------------|---|
| Toxicity to aquatic plants | IC50 (<i>Desmodesmus subspicatus</i>) > 0.01 mg/l Growth rate; Exposure time: 72 h The value mentioned relates to the active ingredient beta-cyfluthrin. No acute toxicity was observed at its limit of water solubility. EC50 (<i>Desmodesmus subspicatus</i>) > 10 mg/l Growth rate; Exposure time: 72 h The value mentioned relates to the active ingredient imidacloprid. |
| Biodegradability | beta-Cyfluthrin: ; not rapidly biodegradable Imidacloprid: ; not rapidly biodegradable |
| Koc | beta-Cyfluthrin: Koc: 508 - 3179 Imidacloprid: Koc: 225 |
| Bioaccumulation | beta-Cyfluthrin: Bioconcentration factor (BCF) 506; Does not bioaccumulate. Imidacloprid: ; Does not bioaccumulate. |
| Mobility in soil | beta-Cyfluthrin: Immobile in soil Imidacloprid: Moderately mobile in soils |
| Environmental precautions | Do not allow to get into surface water, drains and ground water. Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water. Do not apply when weather conditions favor runoff or drift. Apply this product as specified on the label. |

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

| | |
|-------------------------------|--|
| Product | It is best to use all of the product in accordance with label directions. If it is necessary to dispose of unused product, please follow container label instructions and applicable local guidelines. Never place unused product down any indoor or outdoor drain. |
| Contaminated packaging | Empty remaining contents. Do not re-use empty containers. Place empty container in trash. |
| RCRA Information | Characterization and proper disposal of this material as a special or hazardous waste is dependent upon Federal, State and local laws and are the user's responsibility. RCRA classification may apply. |



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SECTION 14: TRANSPORT INFORMATION

49CFR Not dangerous goods / not hazardous material

IMDG

UN number **3077**
Class **9**
Packaging group **III**
Marine pollutant **YES**
Proper shipping name **ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID,
N.O.S.
(BETA-CYFLUTHRIN MIXTURE)**

IATA

UN number **3077**
Class **9**
Packaging group **III**
Environm. Hazardous Mark **YES**
Proper shipping name **ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID,
N.O.S.
(BETA-CYFLUTHRIN MIXTURE)**

This transportation information is not intended to convey all specific regulatory information relating to this product. It does not address regulatory variations due to package size or special transportation requirements.

SECTION 15: REGULATORY INFORMATION

EPA Registration No. 72155-31

US Federal Regulations

TSCA list

None.

US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)

None.

SARA Title III - Section 302 - Notification and Information

None.

SARA Title III - Section 313 - Toxic Chemical Release Reporting

Beta-Cyfluthrin 68359-37-5 1.0%

US States Regulatory Reporting

CA Prop65

This product does not contain any substances known to the State of California to cause cancer.

This product does not contain any substances known to the State of California to cause reproductive harm.

US State Right-To-Know Ingredients

Beta-Cyfluthrin 68359-37-5 NJ



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Canadian Regulations
Canadian Domestic Substance List
None.

Environmental
CERCLA

None.

Clean Water Section 307 Priority Pollutants

None.

Safe Drinking Water Act Maximum Contaminant Levels

None.

EPA/FIFRA Information:

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information required on the pesticide label:

Signal word: Caution!

Hazard statements: Harmful if swallowed, inhaled or absorbed through the skin.
Moderate eye irritation.
Avoid contact with skin, eyes and clothing.
Wash thoroughly with soap and water after handling.
Remove and wash contaminated clothing before re-use.

SECTION 16: OTHER INFORMATION

NFPA 704 (National Fire Protection Association):

Health - 1 Flammability - 0 Instability - 0 Others - none

HMIS (Hazardous Materials Identification System, based on the Third Edition Ratings Guide)

Health - 1 Flammability - 0 Physical Hazard - 0 PPE -

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

Reason for Revision: Revised according to the current OSHA Hazard Communication Standard (29CFR1910.1200)

Revision Date: 05/06/2014

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